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BOARD OF WORKS

FOR THE

ST. OLAVE'S DISTRICT, SOUTHWARK.

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RÉPORT

ON THE

SANITARY CONDITION

OF THE

DISTRICT.

BY

J. NORTHCOTE VINEN,

*Medical Officer of Health.*

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Printed and Circulated by Order of the Board.

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TO THE  
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GENTLEMEN,

I beg leave to submit to your Board the following Report of the Sanitary Condition of the District, and of those peculiarities and influences which affect the health of the inhabitants. There is, I believe, a very growing conviction abroad, that the poor of this country, who from circumstances are often compelled to live in close, ill-drained, and ill-ventilated habitations, should no longer be left to struggle unaided with all the chances that accompany destitution. This seems now a recognized obligation not only of society, but also of the Government. Since you did me the honor of electing me as your Officer of Health, I have visited every court, alley, and locality in the District that experience teaches us presents the most favorable circumstances under which diseases, especially those of an epidemic or zymotic class, would take root and develop themselves, with the view of ascertaining as far as possible those conditions and influences most affecting public health, particularly with relation to water supply, drainage, &c. In my examination of the District, I

found that within the last few years great efforts have been made by the former Board, as well as by private individuals, to improve the condition of the poorer localities; but while I find that much has been done, a great deal has again relapsed into its former state, or its usefulness become greatly impaired, for want of that constant and systematic supervision, without which no permanent good can be derived.

In determining the salubrity or unhealthiness of any locality, there are certain elements of importance for examination—as position, elevation, soil, extent, density of population, &c. With regard to the position of the District: it is situated at the South-east of London, closely shut in on every side by masses of houses, except on the North, where it is bounded by the River Thames, which has hitherto been made little better than a vast open sewer, receiving as it does the excreta of upwards of two millions of inhabitants, which is daily washed to and fro by the tide. The evaporation proceeding from this vast surface carries with it, especially in warm, close weather, noxious and unwholesome gases, arising from the putrefaction of the large amount of animal and vegetable matter contained in it, which becoming diffused over the low-lying districts on its banks, thus forms one source of disease. I need only mention the offensive state of the river last summer, in proof of the immense amount of impurity that must be contained in it. Nor is this foul state of the river to be wondered at, when we consider that there are 141 public sewers between London and Battersea bridges, and that from thence to Richmond there are 68 more.

The elevation of the District is about three feet above Trinity high-water mark. The influence which this low level has on the health of the population, cannot be better exemplified than by the tables of the Registrar General, showing the mortality by Cholera in 1849 and 1854, of the population of London, at different elevations. It is there proved that the ratio of deaths goes on increasing, as the elevation above high-water mark decreases. The mortality in the London districts possessing the highest elevation of from 100 to 350 feet, being on the average not more than 11 deaths to 10,000 persons; while that at the low level of from 1 to 3 feet, being 133 to 10,000 persons.

The nature of the soil of the District presents no peculiarity over that of the Metropolis generally; it consists of

- 1,—Made ground, formed of earth, artificial and alluvial deposits.
- 2,—Gravel and sands.
- 3,—London clay (blue).
- 4,—Plastic clay and sand, resting on
- 5,—Chalk, generally at a considerable depth.

This is the general geological formation of what is termed the London basin.

The extent of the District is about 169 acres. The population at the last census, in 1851, was 19,240. The number of houses 2,440. This gives an average of about 114 inhabitants per acre, or 8 in each house.

Having now briefly alluded to the position, eleva-

tion, geology, extent, population, and its density per acre of the District, I will proceed to offer some remarks on those points which more immediately and directly exert their influence on the health of the inhabitants. For this purpose my remarks will come under the following heads—viz. :

I. —Water supply.

II. —Drainage.

III.—Habitations of the poor.

IV.—Condition of the courts, alleys, and passages.

V. —Burial-grounds.

I.—*Water Supply.* It would be no exaggeration of the importance of a plentiful supply of good water, to affirm that it is one of the first essentials of decency, comfort, and health. The observations I have to offer on this subject, will relate to its quantity, quality, and methods of storing it for use.

From the very numerous enquiries I have made in every part of the District, I have no reason to doubt that sufficient water is pumped into it for all ordinary purposes ; and with the exception of those courts where the vicious stand-cock system still exists, there appears to be a plentiful supply of water. A great alteration has taken place in this respect within the last few years—numbers of houses having now a separate supply, or derive it from a large tank or butts common to a whole court, that previously depended for it on a small iron pipe, like a gas pipe, with the end bent downwards. There are several courts in which this system still prevails. There is never more than one or two of these pipes in a court ;



the water is turned on daily for half or three quarters of an hour, when the people flock with whatever utensils they have at hand, waiting their turn for this miserably scanty supply, to store it in open tubs, pans, &c., to be kept most probably in their only room, where a whole family live day and night. This system is so bad from the very scanty supply that can be obtained, as well as from the injury the water must necessarily sustain by the mode in which it is kept, that I earnestly hope your Board will not suffer it to continue longer than is absolutely necessary for its alteration.

The total number of gallons daily supplied by the Southwark and Vauxhall Water Company, are 7,287,289 to 40,046 houses, which gives an average of nearly 182 gallons daily to each house.

Few changes have lately taken place of greater importance to the health and comfort of the District, than the improved quality of the water at present supplied. This change took place in the course of last year, and is clearly manifest to all using it. Previous to last year, the water supplied to this District was taken from the river at Battersea—affected as it is there by all the poisonous impurities carried into it by the sewers of the Metropolis. It is now taken at Hampton, six miles above Teddington Lock, and twenty-six from London—quite beyond the influence either of the tide or sewers. It is brought from there by a main to the filtering reservoirs at Battersea, which cover an area of about twenty acres.

A perfectly pure water is one that, when boiled until it is entirely evaporated, leaves no residue behind; but scarce any water of this description has ever been found in nature. Water of all kinds consist of oxygen and hydrogen, chemically combined in a definite proportion; whatever matters are contained in it besides, are extraneous, and have nothing to do with its composition. The most important contamination to which water is subject, is that by organic matter. A chemical examination of the water previously supplied, and that supplied at present to this District, yield the following result :—

#### FORMER SUPPLY.

Mineral or inorganic matter 38° 220

Organic matter, - - - 3 560

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Total impurity per gallon, 41° 780 grains or degrees.

#### PRESENT SUPPLY.

Mineral or inorganic matter 13° 2

Organic matter - - - 1° 4

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Total impurity per gallon, 14° 6 grains or degrees.

The former supply therefore contained nearly 42 grains of impurity per gallon; while the present contains but little more than 14 grains. The mineral matter contained in the present supply is chiefly carbonate of lime and common salt; the organic matter is of a vegetable nature, and no trace exists of sewage or other offensive matter, either dissolved or undissolved. It is thus proved to be a good and wholesome water.

An intermittent supply of water brings with it the necessity for providing some means for its storage, and a variety of receptacles, frequently of a most objectionable description, are used for that purpose. In the poorer class of houses we find pans, butter-firkins, tubs, butts, and some few cisterns. Some courts are supplied with large butts or cisterns for the common use of all the persons living in them; but in houses having a separate supply of water, one sees constantly in inspecting the courts and alleys, instances of its being kept in wretched little tubs or butts in every stage of decay; a very large proportion of them are without a covering of any kind, and being thus exposed to the influence of light and air, are placed under the most favorable circumstances for the developement of *confervæ* and other vegetable productions, as well as *animalculæ* and many forms of *infusoriæ*. On the surface of the water one habitually sees a film of soot and dust, and at the bottom will be found animal and vegetable refuse, bones, combs, broken crockery, cats, and every kind of dirt. Another evil which tends to render the water foul, is the general absence of taps to the butts; so that it has to be dipped out, washing the dirt from the sides of the vessel used for that purpose, and constantly stirring up the sediment—besides which, the mere motion and agitation exerts a great effect on its purity. The situation in which these butts are often placed, has also a very considerable influence on the purity of the water—which possesses, in common with many other substances, the property of absorbing any gases with which it may happen to come in contact—and as these vessels are very frequently placed in close

contiguity to the privy, the water soon becomes infected with its foulness. I need hardly say such an addition as this to the other objectionable circumstances connected with the storage of water, would not render such cesspool-flavored stuff a very attractive or a very wholesome beverage. An instance of this kind of arrangement exists in Darley's Buildings, where there is an open privy for the common use of nine houses, close by which, and under the same roof is a large uncovered water-butt; no arrangement can be more faulty than this. These are some of the evils attending an intermittent supply of water; there can be no doubt that for all sanitary purposes a constant supply, at high pressure, is immeasurably superior. This system is adopted in Preston, Glasgow, Newcastle, Bristol, Manchester, Nottingham, and many other places. At the last-mentioned place an unlimited supply of wholesome filtered water is forced by day and night, at high pressure, through all the streets, to the tops of almost all the houses, at a cost for the dwellings of the poor of about 5 farthings per week. The Act providing this system of supply for the Metropolis, will come into operation in two or three years; but I fear it will be rendered almost inoperative from the expense entailed on it of new pipes, &c., to every house. Holcombe's Buildings has the advantage of the best-arranged water supply in the District; there are eighteen houses, to each of which the water is laid on from a large slate cistern, to which there is a constant supply at high pressure

II.—*Drainage.* Within the last few years, a great number of houses in the District have been provided



with a drain of some sort, that formerly depended on surface drainage only. There are now existing over the District a vast number of open privies and cess-pools. There are also a great number of pan-closets and pipe drains ; and however great this improvement may be over the open privies, but little benefit, comparatively, is derived from them, for in my inspection of the courts and alleys, I have found but two instances where the water was properly laid on—viz., Heath's-rents and College-street, I can have no hesitation in saying, that I believe the cesspool nuisance to be one of the greatest existing here. Where they exist, they are usually placed in small, confined yards ; the volatile abominations emanating from them poison the whole atmosphere around, and operate most powerfully in diminishing the chances of life, by offering some of the most favorable circumstances for the developement of epidemic disorders. No arrangement can be considered effective that does not combine a good drainage with an ample supply of water. I hope to bring the whole of these nuclei of disease under the notice of your Board, with a view to their entire suppression.

In connection with this subject, I beg leave to recommend to your Board the urgent necessity there exists for trapping all the gullyholes in the District—the power to do which you have under the 71st section of the New Metropolitan Act. Everyone must be most disagreeably familiar with the foul gases exhaling through these places, especially in warm weather, and the means used by persons living immediately opposite them by covering the gratings with

mats, pieces of carpet, &c., to prevent as much as possible the effluvia from ascending. Trapping is rendered more necessary in this locality when we consider that, from the low level of the sewers, the drainage is retained in them for 16 out of every 24 hours, or two-thirds of every tide.

III.—*Habitations of the Poor.* The condition of the houses inhabited by the poorer classes differs much; generally those in the worst condition, and the most overcrowded, are tenanted by Irish. Many are situated in close, ill-ventilated courts, with the internal walls black and dirty, and so constructed as to have neither back windows or back doors—forming a perfect *cul-de-sac*, where a foetid atmosphere remains stagnant to be breathed by the crowded inhabitants. Houses and courts so constructed generally possess a high mortality, as the systems of those inhaling this vitiated atmosphere, become depressed, and are the ready victims to disease. One great and very general evil which exists in every part of the District, is the dirty, sodden, ill-paved condition of the back yards. Where any attempt at paving is made, it is with loose, broken pieces of stone or brick—the holes in which they are placed becoming the receptacles for foul water, defying all attempts at cleanliness. This is the state of a great majority of the yards belonging to the poorer class of houses; indeed it is rare to see one in any other condition.

One of the greatest and most general complaints—one that met me at every turn—was the neglect of the dustmen's duties. There are very numerous instances

of refusal to remove dust and rubbish from the houses without the payment of some trifling gratuity; in many cases it had been accumulating for weeks and even months, its removal depending on these poor people being able to dole out a few halfpence for beer money. I am induced to bring this particularly under your notice, from the very numerous and, as it appeared to me, well-grounded complaints, I met with, as well as from its importance in regard to health and cleanliness; and the more so, from the general absence in these houses of any proper receptacle whatever for the dust, &c.—either one corner of a very small yard serving for this purpose, or the refuse is thrown into the public court; or, as I have often seen it done, it is stored in baskets, pans, &c., waiting the dustman's pleasure or convenience to remove it.

Sub-letting is a system that I have no doubt is productive of great injury—not only in this, but in other localities—both to the poorer class of tenants, and to the houses also. The object in such cases being to obtain as much as possible from the tenants, without any regard being paid to their comfort, or the condition of the habitations. I feel quite convinced, from my inspection of the District, that were owners of houses to put them into a generally better condition, and use some endeavours to maintain them so, their efforts would be seconded by the occupiers; they would attract to them a better class of tenants, and a decided improvement would take place in their habits and appearance. Viewing it merely in a pecuniary light, I am persuaded it would be to the interest of the landlords to do so; this has been so repeatedly proved

as to have become an established fact, and I have myself seen so many instances of it, that I believe it may be taken as a rule. But when the internal walls of a house are blackened and dirty, the small back yards foul, wet, and ill-paved, with a dust-heap in one corner, and a cesspool in another, the task of keeping such a place decent is soon given up in despair, and the people settle down in a hopeless state of dirt and misery. Dirt, too, is an expensive thing in any locality; it engenders disease—the mortality becomes higher than it otherwise would be—with sickness comes parish relief—and with death a lengthened charge of the surviving family on the poor-rate.

I must not omit alluding to the want of water-closet accommodation in many of the courts. There are six houses in Tattle-court and four in Davis'-alley in which are 94 people, who have but three privies for their use; in Tattle-court 47 persons have but one place; in Bell's-rents 54 persons with one place—Rowley's-buildings five houses have one also; Victoria-cottages have two for 18 houses; 60 people in Darley's-buildings have but one; and in Albion-court there are two for 71 persons. Places of this kind for the common use of so many persons are always in a foul condition; and when we remember that they are used indiscriminately by men, women, and children, I need hardly say how subversive to all ideas of ordinary decency and morality, such an arrangement must be.

IV.—*Condition of the Courts, Alleys, and Passages.*  
One of the greatest and most decided public improvements that have been effected in the District within



the last few years, is the flagging the courts and passages—nearly all of which are so improved, with the exception of those belonging to private owners. Too much importance can scarcely be attached to this improvement, as the unpaved, uneven, broken surface of these places previously, became the deposit of offensive matters from the houses, and thus presented an exhaling surface of poisonous gases to contaminate the surrounding atmosphere. Nearly all the paved courts I visited were clean, and afforded a favorable contrast to their former condition. By thus substituting a smooth, hard surface, for broken pavements and earth, these places can now be kept clean with ease, and any deposit at once detected and removed. But in order that full benefit may be derived from this excellent improvement, I would wish to press on your attention the necessity for the scavengers performing their duties punctually and thoroughly, as I find lying in many of the courts and alleys heaps of refuse matter which should be periodically removed. Could the owners of the private courts remaining unpaved, be induced to place them in the same condition as the public ways, it would be most desirable, and be extending the advantages of a very decided improvement.

V.—*Burial Grounds.* There are five burial grounds in the District, all of which were formally closed in January, 1854, by an Order in Council ; but for some years previously burials were almost entirely discontinued in all but St. John's Churchyard, and St. John's new Burial-ground, in Butler's-place. The chance of any injury arising from either of these grounds, is every year becoming less. The surface of St. John's

Church-yard and the old Burial-ground, has been covered with large quantities of fresh mould, which, with the vegetation growing in them, contribute very materially to improve the sanitary condition of these places. Of St. John's new Burial-ground, I have made a special report to your Board some time since.

Having now stated some of the sanitary evils of the District, I beg to submit to your Board those means which appear to me to be desirable for their removal, as well as for putting the District under habitual and systematic surveillance.

First, with regard to water supply, I would recommend that the stand-cock system be abolished forthwith; and every house should, as far as practicable, have a separate supply of water; and that better receptacles should be provided, with taps and proper coverings, to protect it from external impurities.

That every privy should be provided with a sufficient supply of water to properly cleanse the discharge-pipe at each application.

That all cesspools be filled up as soon as possible; and that better water-closet accommodation be provided than at present exists in many of the courts.

That all the gully-holes in the District be trapped.

That the periodical and punctual performance of the scavengers' and dustmen's duties, be strictly enforced.

That dust-bins, properly covered, be provided for each house, or at some convenient place for the common use of a whole court.

That if any of the public courts, alleys, or passages remain unflagged, they should be flagged forthwith; and efforts used to induce the owners of private ones to flag them also, and particularly the back yards of the houses.

That in houses with defective ventilation, additional windows or louvres be provided, where practicable, for the admission of light and air.

To bring these matters systematically before your Board, and to place every house in the poorer parts of the District under regular supervision for sanitary purposes, I would suggest that a form should be prepared similar to the one I enclose, marked No. I., by which an account can be readily taken by the inspector of each house, relating to its condition, ventilation, water-supply, drainage, cesspools, number of inhabitants, &c.; this account to be afterwards entered in a book similarly prepared, and indexed. The state of each house will thus be brought under regular inspection; and I should be enabled under form No. II., to place before you the orders I should recommend your Board to issue for the removal of whatever sanitary evils may be found to exist in any of them.

For the purpose of laying before you the mortality of the District, in my periodical reports, it will be necessary that the District Registrars furnish me

weekly with a copy from their books of each death registered by them, in the form No. III For doing this, some payment to the Registrar is expected. In the City 2d. each entry is paid; but I find the Metropolitan Registrars have now agreed amongst themselves to require a payment of 2s. for each weekly return.

I fear, Gentlemen, you will consider that I have trespassed too much on your time; but the importance of the subject, affecting as it does, not only the health and comfort of our poorer neighbours, but of ourselves also, must plead my excuse. I have endeavored in this Report to bring before you the general sanitary condition of the District—to point out some of the more prominent evils that exercise their influence on health—and to offer some suggestions for their removal—as well as for putting the District under systematic supervision. In conclusion, permit me to add, that I feel assured of the co-operation of your Board in removing or ameliorating whatever evils may be found to exist, and by thus fulfilling the great object of sanitary science, improve the physical, social, and moral condition of the poor.

I have the honor to be,

GENTLEMEN,

Your most obedient Servant,

J. NORTHCOTE VINEN,

*Medical Officer of Health,  
St. Olave's District.*

April 16th, 1856.

[illegible]

ORDERS RECOMMENDED FOR ISSUE.

No. II.

											No. of days allowed.	Second Notice.
Houses or Premises.	Cleanse and Lime-wash. partly, wholly	Rubbish Dust, or Refuse.	Provide Dust-bin properly covered.	Pave Yard Cellar, or open space	Water to Premises, with needful apparatus provide restate	Fill Cesspool, complete works of Drainage, & water supply	Water to Privies, with all needful apparatus, & with all required amendment of Privies or Drainage. Provide.	Restate.	Repair, Amend, Cleanse, or trap drains or sinks.	Ventilate Passage, Room, or Staircase.	Miscellaneous.	

No. III.

**MORTALITY RETURN OF THE PARISH OF ST.**

Six.

FOR THE WEEK ENDING SATURDAY, THE DAY OF

185

Sex.		Age.	Residence.	Occupation.	Disease.
M.	F.				

